

## WHAT CLAIMED IS:

1. A recording medium loading apparatus capable of loading a recording medium,  
comprising:

a carrier for transferring the recording medium between an eject position and a  
loaded position;

a holder for movably holding the carrier; and

a carrier position detecting device, for detecting a position of the carrier with respect  
to the holder;

wherein the carrier position detecting device further comprises switches installed on  
the carrier which is on/off by an operation, and switch operation members installed on the  
holder for operating the switches in response to a move of the carrier, and

wherein the switch operation members perform different operations with respect to  
the switches for each predetermined detecting position of the carrier.

2. The recording medium loading apparatus of claim 1, wherein the switches are  
on/off by pressing or releasing, and the switch operation members are formed by a switch  
press cam that presses or releases corresponding to moving positions of the carrier.

3. The recording medium loading apparatus of claim 2, wherein a plurality of the  
switch press cams are installed and number of the switches is the same as the number of  
the switch press cams, and the position of the carrier is detected by a combination of  
on/off of the switches.

4. A recording medium loading apparatus, comprising:

a carrier capable of holding a plurality of types of recording media;

a holder for movably holding the carrier in an insertion/eject direction of the  
recording medium;

a carrier driving device for driving the carrier in the insertion/eject direction;  
a base having a medium driving device for rotatably driving the recording medium  
in a status wherein the recording medium is loaded;

5 a clamp mechanism for clamping the recording medium by the medium driving  
device in a manner that the holder and the base are moved to be relatively close;

a medium determining device for determining types of the recording media; and

a control device for controlling and driving the carrier driving device and the clamp  
mechanism,

wherein when the type of the held recording medium is determined by the medium  
determining device, by controlling and driving the carrier driving device, the control  
device causes the carrier move to a proper clamp position corresponding to the  
determined recording medium, and thereafter causes the medium driving device clamp  
the recording medium.

5. A recording medium loading apparatus, comprising:

a carrier capable of holding a plurality of types of recording media;

a holder for movably holding the carrier in an insertion/eject direction of the  
recording medium;

a carrier driving device for driving the carrier in the insertion/eject direction;

a position detecting device for performing position detections of the carrier;

20 a disc determining device for determining the types of the recording media; and

a control device for changing a driving status of the carrier at a plurality of detecting  
positions set corresponding to the types of the recording media by controlling and driving  
the carrier driving device,

wherein at least one of the detecting positions set for one of the recording media and

the detecting positions set for another recording medium is set to the same position.

6. The recording medium loading apparatus of claim 5, wherein one of the recording media is a disc recording medium with a diameter of 8cm, the detecting positions set for one of the recording media are positions clamping the 8cm disc recording media, and

5 wherein another recording medium is a disc recording medium with a diameter of 12cm, the detecting positions set for another recording medium are loading start positions for the 12cm disc recording media.

7. The recording medium loading apparatus of claim 5, wherein one of the recording media is a disc recording medium with a diameter of 8cm, the detecting positions set for one of the recording media are retrocede positions for the 8cm disc recording media, and

10 wherein another recording medium is a disc recording medium with a diameter of 12cm, the detecting positions set for another recording medium are positions clamping the 12cm disc recording media.

8. A recording medium loading apparatus, comprising:

15 a recording medium transfer mechanism, for transferring an inserted recording medium between an eject position and a loaded position;

a driving device for driving the recording medium transfer mechanism; and

a control device for controlling the driving device, wherein

20 between the eject position and the loaded position in front of the insertion direction of the recording medium, the control device performs a control process such that the driving device generates a driving force having a magnitude that the recording medium transfer mechanism is not operated.